

SEED MIXES
(FOR WETLANDS)

ModAg Wetland Seed Mix		
SCIENTIFIC NAME	COMMON NAME	PERCENT SEED
Panicum virgatum	switchgrass	33
Elymus virginicus	Virginia Wild Rye	25
Lolium multiflorum	annual rye	18
Dactylis glomerata	orchard grass	16
Trifolium pratense	red clover	5
Agrostis alba	red top	3
	Total	100
Seeding rates: 25 bulk lbs/acre with grain oats or equal at 30 lbs/acre		
* Seed mix subject to change based on landowner comments		

Emergent Wetlands Seed Mix		
SCIENTIFIC NAME	COMMON NAME	PERCENT SEED
Carex vulpinoidea	Fox Sedge	27
Sparganium eurycarpum	Giant Burreed	10
Carex lurida	Lurid Sedge	8
Carex squarrosa	Squarrose Sedge	8
Scirpus atrovirens	Green Bulrush	8
Verbena hastata	Blue Vervain	7
Carex comosa	Cosmos Sedge	5
Carex crinita	Nodding Sedge	5
Aster puniceus	Purple Stemmed Aster	3
Eupatorium fistulosum	Joe Pye Weed	3
Eupatorium perfoliatum	Boneset	3
Iris versicolor	Blue Flag	3
Mimulus ringens	Monkeyflower	3
Asclepias incarnata	Swamp Milkweed	2
Dulichium arundinaceum	Three Way Sedge	2
Solidago patula	Rough Leaved Goldenrod	2
Lobelia siphilitica	Blue Lobelia	1
	Total	100
Seeding rates: 25 bulk lbs/acre with grain oats or equal at 30 lbs/acre		

Scrub Shrub Wetland Seed Mix		
SCIENTIFIC NAME	COMMON NAME	PERCENT SEED
Elymus virginicus	Virginia wildrye	15
Panicum clandestinum	deertongue	10
Andropogon gerardii	big bluestem	10
Sorghastrum nutans	indian grass	10
Panicum virgatum	switchgrass	25
Carex lurida	lurid sedge	10
Helianthus angustifolius	swamp sunflower	6.5
Rudbeckia hirta	black-eyed susan	3.3
Verbena hastata	blue vervain	3
Juncus effusus	soft rush	2
Eupatorium perfoliatum	Boneset	1
Eupatorium fistulosum	Joe Pye Weed	1
Baptisia australis	false indigo	1
Vernonia noveboracensis	New York ironweed	1
Lobelia siphilitica	Great blue lobelia	0.5
Monarda fistulosa	Wild bergemot	0.5
Euthamia graminifolia	Grassleaf goldenrod	0.2
Seeding rates: 25 bulk lbs/acre with grain oats or equal at 30 lbs/acre		

Forested Wetland Seed Mix		
SCIENTIFIC NAME	COMMON NAME	PERCENT SEED
Carex vulpinoidea	Fox Sedge	20
Elymus virginicus	Virginia Wild Rye	20
Carex squarrosa	Squarrose Sedge	10
Scirpus atrovirens	Green Bulrush	8
Verbena hastata	Blue Vervain	6
Carex comosa	Cosmos Sedge	5
Carex crinita	Nodding Sedge	5
Zizia aurea	Golden Alexanders	4
Asclepias incarnata	Swamp Milkweed	3
Aster puniceus	Purple Stemmed Aster	3
Eupatorium fistulosum	Joe Pye Weed	3
Eupatorium perfoliatum	Boneset	3
Euthamia graminifolia	Grass Leaf Goldenrod	3
Mimulus ringens	Monkeyflower	3
Vernonia noveboracensis	New York Ironweed	3
Lobelia siphilitica	Blue Lobelia	1
	Total	100
Seeding rates: 25 bulk lbs/acre with grain oats or equal at 30 lbs/acre		

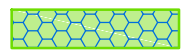

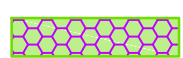

Maintained Lawn Wetland Seed Mix		
SCIENTIFIC NAME	COMMON NAME	PERCENT SEED
Elymus virginicus	Virginia Wild Rye	50
Festuca rubra	creeping red fescue	25
Lolium multiflorum	annual rye	20
Trifolium repens	whiteclover	5
	Total	100
Seeding rates: 25 bulk lbs/acre with grain oats or equal at 30 lbs/acre		
* Seed mix subject to change based on landowner comments		

NOTE: THIS SEED MIX WILL BE USED FOR PEM WETLANDS LOCATED IN MAINTAINED LAWN AREAS.

TEMPORARY SEED MIX

Temporary Seed Mix- As needed (30 lbs per acre)		
SCIENTIFIC NAME	COMMON NAME	PERCENT SEED
Lolium multiflorum	annual ryegrass	40
Avena sativa	oats	30
Secale cereale	winter rye	30
* All exposed soil shall be seeded with Temporary Seed Mix.		

WETLAND RESTORATION

	PEM WETLAND - TO BE RESTORED (SEE NOTES FOR WETLAND RESTORATION BELOW)
	PSS WETLAND - TO BE RESTORED (SEE NOTES FOR WETLAND RESTORATION BELOW)
	PFO WETLAND - TO BE RESTORED (SEE NOTES FOR WETLAND RESTORATION BELOW)
	MODAG WETLAND - TO BE RESTORED (SEE NOTES FOR WETLAND RESTORATION BELOW)

NOTES FOR WETLAND RESTORATION:

PEM WETLANDS IMPACTED WILL BE RESTORED AS PEM WETLANDS*

PSS WETLANDS WITHIN THE LIMITS OF DISTURBANCE AND OUTSIDE THE OPERATIONAL CORRIDOR WILL BE RESTORED AS PSS WETLANDS. PSS WETLANDS WITHIN THE OPERATIONAL CORRIDOR WILL BE RESTORED AS PEM WETLANDS.

PFO WETLANDS WITHIN THE LIMITS OF DISTURBANCE AND OUTSIDE THE OPERATIONAL CORRIDOR WILL BE RESTORED AS PFO WETLANDS. PFO WETLANDS WITHIN THE OPERATIONAL CORRIDOR WILL BE RESTORED AS PEM WETLANDS.

MODAG WETLANDS IMPACTED WILL BE RESTORED AS MODAG WETLANDS.



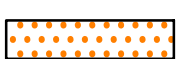
ALL PEM WETLANDS TO BE RESTORED EXCEPT FOR WETLAND 021617, BR. 1001, PEM LOCATED AT MP 113.8, WHICH IS PROPOSED TO BE FILLED FOR THE DEVELOPMENT OF THE TRANSCO RECEIVER SITE.

WATERBODY RESTORATION



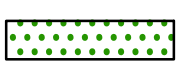
	WATERBODY - TO BE RESTORED
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RIPARIAN ZONE/TRANSITION AREA
RESTORATION CATEGORIES



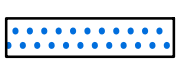
AGRICULTURE

	RIPARIAN ZONE
	RIPARIAN ZONE/ TRANSITION AREA
	TRANSITION AREA

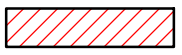
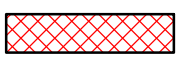
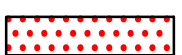
UPLAND FOREST

	RIPARIAN ZONE
	RIPARIAN ZONE/ TRANSITION AREA
	TRANSITION AREA



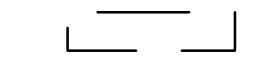
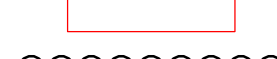

NATIVE GRASSLAND

	RIPARIAN ZONE
	RIPARIAN ZONE/ TRANSITION AREA
	TRANSITION AREA


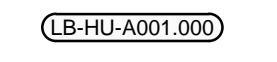
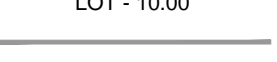



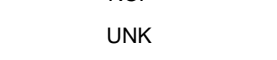




MAINTAINED LAWN

	RIPARIAN ZONE
	RIPARIAN ZONE/ TRANSITION AREA
	TRANSITION AREA

PROPOSED
















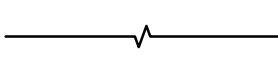


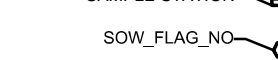

	PROPOSED PIPELINE
	LIMITS OF DISTURBANCE
	PROPOSED PERMANENT EASEMENT
	OPERATIONAL CORRIDOR
	PROPOSED TREE LINE

EXISTING

	PROPERTY LINE
	PARCEL ID WITH BLOCK AND LOT NUMBER
	LOT - 10.00
	EXISTING CULVERT
	CORRUGATED PLASTIC PIPE
	CORRUGATED METAL PIPE
	HIGH DENSITY POLYETHYLENE PIPE
	POLYVINYL CHLORIDE PIPE
	REINFORCED CONCRETE PIPE
	UNKNOWN
	EXISTING FOREIGN UTILITY EASEMENT

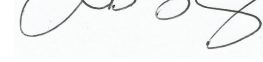
LINETYPE LEGENDS

EXISTING

	EXISTING MAJOR CONTOURS
	EXISTING MINOR CONTOURS
	EXISTING PIPELINE
	EXISTING OVERHEAD LINE
	EXISTING FENCE
	WETLAND (SURVEYED)
	WETLAND (PUBLIC)
	WATERBODY (SURVEYED)
	WATERBODY (PUBLIC)
	TRANSITION AREA
	RIPARIAN BUFFER (OUTER LIMITS ONLY)
	STREAM CENTERLINE (SURVEYED)
	STREAM CENTERLINE (PUBLIC)
	LIMITS OF WETLAND DELINEATION
	EXISTING TREE LINE
	EXISTING TREE
	WETLAND FLAG
	SAMPLE STATION
	STATE OPEN WATER FLAG
	PHOTO LOCATION (SEE REPORT)

I AM A DULY REGISTERED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT EXISTING CONDITIONS SHOWN WERE FIELD LOCATED AND PREPARED UNDER MY DIRECT SUPERVISION.

THOMAS D. STRONG
PROFESSIONAL LAND SURVEYOR
N.J. LIC. NO. 24GS03676100

 08/01/2019
SIGNATURE DATE

I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF NEW JERSEY AND I HEREBY CERTIFY THAT THE PROPOSED ENVIRONMENTAL DISTURBANCES SHOWN ARE ACCURATE AND CORRESPOND WITH THE DETAILED ENGINEERING DRAWINGS.

MICHAEL J. DENICHILO
PROFESSIONAL ENGINEER
N.J. LIC. NO. 24GE05078700


 08/01/2019
SIGNATURE DATE

TOWNSHIP/ COUNTY LINE SOURCE:
AVAILABLE AT WWW.NJ.GOV




REVISIONS					
	REVISIONS	DATE	DRAWN	CK	APPR
0	ISSUED FOR NJDEP PERMIT	07/2019	RJP	KEK	MJD

PREPARED FOR



PREPARED BY



111 WOOD AVENUE SOUTH, LEBEN, NJ, 08830
CERTIFICATE NO. 24GA28016800

PENNEAST PIPELINE PROJECT		
RESTORATION PERMIT PLANS LEGEND AND SEED MIX SHEET 2 OF 2 PROPOSED 36" PENNEAST PIPELINE PROPOSED 12" GILBERT LATERAL PROPOSED 36" LAMBERTVILLE LATERAL		
SCALE	DRAWING NO.	REVISION
	PE-RES-C-006	0